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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,818

04/26/2007

Donald E. Scott

3964

5779

37761

7590

02/09/2009

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EXAMINER

MUROMOTO JR, ROBERT H

ART UNIT

PAPER NUMBER

3765

MAIL DATE

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02/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,818	Applicant(s) SCOTT, DONALD E.	
	Examiner BOBBY H. MUROMOTO JR	Art Unit 3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 11-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 11 recites "to produce a fabric that passes aircraft manufacturing specifications" but does not recite what these limitations are; therefore these claims and those depending therefrom are not enabled.

Claim Objections

Claims 12, 13, 25, 26, 32, 33, 34, and 37 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. These claims all recite limitations with regard to the resultant properties of the fabric produced and do not limit the processes set forth by the instant intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,121,902.

'902 discloses stable concentrated polymer mixtures suitable for the treatment of textile materials, and in particular for the treatment of wool-containing fabrics to render them shrink resistant.

'902 discloses the use of blended wool and polyester (inherently a synthetic, fire resistant fiber and the blended yarn would inherently be a spun yarn as wool yarn can not be formed any other way).

'902 discloses woven fabrics.

'902 discloses using heat and pressure or heat setting (a tenter is a common machine used to heat treat web materials and textile materials) to stabilize the fabric the treated fibrous material may be subjected to a heating treatment. "Such heating may be by a direct contact with heated bodies in the form of solid liquids or gases, e.g., hot air or steam or by a radiative means (infrared microwave heating or the like) or by a combination of such methods."

'902 discloses coating the woven fabric with a number of polymers including polyurethane and neoprene. '902 also discloses, "**Further components may be**

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added to the compositions of the present invention and this may also be advantageous. For example when used for the treatment of textile materials, there may be **added agents to prevent needle damage during sewing, softening agents, agents which impart resistance to damage by moths, beetles or mildew, enhance the flame resistance, or the like. A particular advantageous group of compounds which may be added are those with surfactant properties. For example those of the anionic, non-ionic, cationic or amphoteric classes and particularly those prepared from the polymerisation of ethylene oxide.**

The recitations with regard to 'use in aircraft and other transport interior applications' are intended use limitations that do not limit the method of production having no patentable weight.

Claims 12, 13, 25, 26, 32, 33, 34, and 37 do not limit the process of production they are drawn to the resultant properties of the fabric and as such are not considered to have any patentable weight with regards the independent claims all drawn to a method of producing a fabric.

The only limitations not explicitly disclosed by '902 are the percentage blend of wool to polyester, the wool fiber diameter, the wool fiber length, and the exact heating and timing of the heat-setting process.

However, these design variables are all within the technical expertise and routine experimentation by one of ordinary skill in the art.

Further the MPEP states,

Changes in Size/Proportion

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In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("**mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled.**") 531 F.2d at 1053, 189 USPQ at 148.).

In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), **the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.**

Therefore it would have been obvious to one of ordinary skill in the art of polymer, yarn and fabric production to merely scale up the processing variables recited above or the claimed relative dimensions recited above as these types of modifications have been held to not be patentably distinct modifications.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over '902 above and in view of US 5,582,912.

Although '902 teaches essentially all of the limitations of the claimed invention, '902 does not teach the use of stretch breaking yarns to a desired fiber length, the various types of spun yarn formation, nor the use of zirconium coatings that are known

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to be fire retardant.

However, '912 does teach a fire and flame retardant fabric that in its production process uses stretch breaking yarns to desired fiber lengths, the use of "any one of the **conventional systems**, such as the **ring and rotor system, air jet or twist systems** (vortex corresponds to both rotor and twist systems as they both create vortexes to spin or twist the yarns), and with respect to use of flame retarding zirconium coating '912 teaches, "a ceramic and/or **metallic coating** can be formed on a carbonaceous fiber **or fiber structure**, i.e., **a tow, matting, batting, yarn or fabric**. The coated carbonaceous fiber structure can be used in an oxidizing environment and in high temperature applications **where uncoated carbonaceous fiber structures could otherwise not be used satisfactorily**. Ceramic materials can also be utilized in the present invention such as the oxides or mixtures of oxides, of one or more of the following elements: magnesium, calcium, strontium, barium, aluminum, scandium, yttrium, the lanthanides, the actinides, gallium, indium, thallium, silicon, titanium, **zirconium**, hafnium, thorium, germanium, tin, lead, vanadium, niobium, tantalum, chromium, molybdenum, tungsten, and uranium. Compounds such as the carbides, borides and silicates of the transition metals can also be used. Other suitable ceramic materials which can be used are zircon-mullite, mullite, alpha alumina, sillimanite, magnesium silicates, zircon, petalite, spodumene, cordierite and alumino-silicates."

Therefore it would have been obvious to one of ordinary skill in polymer, yarn and fabric production to use stretch breaking to reduce fiber lengths, any of the claimed conventional yarn spinning systems, and flame retardant zirconium coatings to produce

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fibrous, flame retardant structures including woven fabrics.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOBBY H. MUROMOTO JR whose telephone number is (571)272-4991. The examiner can normally be reached on 8-530, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on 571-272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert H Muromoto, Jr./
Primary Examiner, Art Unit 3765